



## COLORADO

### Department of Transportation

Division of Transportation Development

Chief Engineer/Director of Stormwater Compliance  
4201 E. Arkansas Ave.  
Denver, CO 80222

September 1, 2017

U.S. EPA Region 8 NPDES Enforcement Unit

U.T. 1595 Wynkoop Street  
Denver, Colorado 80202-1129  
Attn: Emilio Llamozas (8ENF-W-NP)

CDPHE - WQCD

4300 Cherry Creek Dr. South Denver,  
CO 80246  
Attn: Nathan Moore

RE: September 1 Administrative Order for Compliance on Consent (AOC), CWA-28-2017-0020 deadlines, including paragraph 73 submittal

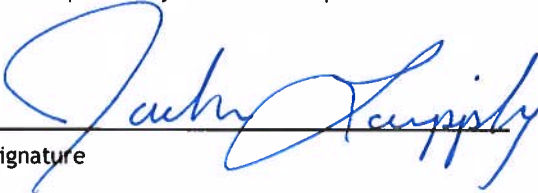
Mr. Llamozas and Mr. Moore:

CDOT has completed all September 1 deadlines and continues its steady progress with resolving all of the corrective actions and recommendations identified in the final AOC dated August 7, 2017. Per the AOC paragraph 73, we are submitting CDOT's written procedures describing how inspection findings are communicated and maintenance activities are tracked (Attachment A). Attachment B is the Standard Operating Procedure that was used to answer those questions in Attachment A.

Please review the attached written procedures. If you have any questions, comments, or additional clarification requests please contact Jean Cordova (303-512-4053 or

[jean.cordova@state.co.us](mailto:jean.cordova@state.co.us)) or Jane Hann (303-757-9630 or [jane.hann@state.co.us](mailto:jane.hann@state.co.us)).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

  
Signature

8/30/2017  
Date

Joshua Laipply, P.E., Director of Stormwater Compliance  
Printed Name

cc: Attachments  
Debra Perkins-Smith, CDOT  
Jane Hann, CDOT  
Jean Cordova, CDOT  
Jim Ballard, Audit Division, CDOT  
Stephanie Gibson, FHWA  
Nathan Moore, CDPHE



## ATTACHMENT A

*73a: How inspections findings are communicated to maintenance personnel.*

- Inspections are performed by a qualified PWQ CM (aka PWQFs) Inspector and are placed into a written inspection report/form which includes findings or potential findings. Photos are often included. PWQ CM locations are identified using the unique SAP functional location number assigned to that individual PWQ CM. The Inspection report/forms are uploaded into SAP and again, identified using the unique SAP functional location number for the individual PWQ CM. The Inspector notifies Maintenance via e-mail that an inspection has been performed and includes the inspection report/form. In the instance that the Inspector is part of the maintenance work crew, this step is not performed because the Inspector will help schedule the necessary work, therefore no additional notification is needed. Once notified, Maintenance can then go into SAP, review the inspection report/form and schedule the necessary work.

*73b: How maintenance work activities are generated and tracked.*

- Maintenance schedules the work based on the inspection report/form. Work shall be performed within 6 months or a plan created within 6 months per MS4 Permit COS000005 Part I.E.2.c.v(C) 3 & 4. The work is performed. After the work is performed, a work order documenting the task was completed is created. The work order is tied to the unique PWQ CM identification SAP functional location number. Often times, photos of the completed work are included in the work order for verification. Until the new GEOe system is statewide (as previously described in response #62 from CDOT to EPA on 6/9/2017), this will be the interim process.

*73c: How CDOT will keep an accurate inventory of PWQFs covered by an IGA and therefore are to be maintained by the municipality.*

- Individual PWQ CMs are given a unique SAP functional location number. Information stored in SAP about that unique SAP functional location number includes who maintains (CDOT or Local Agency or other) and the regulatory mechanism (IGA, Colorado Revised Statute 43-2-135 or other). As new PWQ CMs are constructed, they will be given their own unique SAP functional location number.

*73d: How CDOT will transmit the information from routine inspection of PWQFs to the municipality.*

- Inspections are performed by a qualified PWQ CM Inspector and are placed into a written inspection report/form which include findings or potential findings. Photos are often included. PWQ CM locations are identified using the unique SAP functional location number assigned to that individual PWQ CM. The inspection report/forms are uploaded into SAP and again, identified using the unique SAP functional location

number for the individual PWQ CM. The Inspector notifies the Local Agency MS4 Manager via letter that an inspection has been performed and includes the inspection report/form. The letter also includes the statement that the work shall be performed within 6 months or a plan is created per MS4 Permit COS000005 Part I.E.2.c.v(C) 3 & 4 and requests certification of completion of work (or plan) be sent back to the Inspector. The sent letter shall be uploaded into SAP and filed by the unique SAP functional location number by the Inspector. The Inspector communicates with the Local Agency MS4 Manager around three months later, to verify that the Local Agency will be able to complete the work, within the required 6 month MS4 Permit time period. This verification needs to be written communication; either via e-mail or another letter.

*73e: How CDOT will verify the maintenance needs transmitted to the municipality are accomplished.*

- The Local Agency certifies that the work has been completed and sends that notice back to the Inspector via written e-mail or letter; including photos is preferred. The Inspector uploads the received certification e-mail or letter from the Local Agency into SAP using the unique SAP functional location number for the individual PWQ CM. If the Local Agency is not able to perform the required repairs, or does not send in a certification that the work has been completed or a plan created within the 6 month time frame, and the work requested has not been completed, CDOT has the option to schedule the work using the CDOT maintained PWQ CM process (as described in #73a & #73b) and complete the work. CDOT has the option to send the Local Agency an invoice for the cost of the work. These Local Agency maintained PWQ CMs will be inspected by CDOT at least once per MS4 Permit term to verify that these certifications represent the level of maintenance required by CDOT's MS4 Permit.

## **ATTACHMENT B**

### **SOP**

**PERMANENT WATER QUALITY SOP:  
PWQ CM INVENTORY, COMMUNICATING AND TRACKING INSPECTIONS AND  
MAINTENANCE  
(STANDARD OPERATING PROCEDURE #4.1)**

Revision Number: 1.0  
Date Issued/Revised: 09/01/2017  
PDD Version Number: 1.0

---

## 1.0 Overview and MS4 Approach

This SOP describes the processes of creating an accurate Permanent Water Quality Control Measure (PWQ CM) inventory and communicating and tracking inspections and maintenance of PWQ CMs.

## 2.0 Regulatory Criteria

- MS4 Permit COR00005-Part I.C.3. - Information in the PDD may be revised by the permittee at any time. The permittee must modify the PDD as changes occur to ensure the information is up to date.
- MS4 Permit COR00005-Part I.E.2.c.v(A)3 - A list of citation(s) and location(s) of applicable documents that demonstrate that the permittee has operation and maintenance procedures that ensure the long-term observation, maintenance, and operation of control measures, including routine inspection frequencies and maintenance activities.
- MS4 Permit COR00005-Part I.E.2.c.v(B)1 - The process and tools used for documenting inspections.
- MS4 Permit COR00005-Part I.E.2.c.v(C) - Long Term Operation and Maintenance and Post Acceptance Oversight Site Inspection for Control Measures Installed in Accordance with this Permit and Previous Permits: A list of citation(s) and location(s) of applicable documents that demonstrate that the permittee has procedures for long term operation and maintenance and post acceptance oversight site inspections.
- MS4 Permit COR00005-Part I.E.2.c.v(D) - Tracking for Control Measures Installed in Accordance with this Permit and Previous Permits: A list of citation(s) and location(s) of applicable documents that demonstrate that the permittee has written procedures for maintaining the required tracking information.
- Administrative Order of Consent: #73 – Develop a procedure to ensure long-term maintenance of PWQFs, including those covered by IGAs or similar agreements with municipalities.
- Administrative Order of Consent: #73a – How PWQF inspection findings are communicated to maintenance personnel.

- Administrative Order of Consent: #73b – How PWQF maintenance work activities are generated and tracked.
- Administrative Order of Consent: #73d – How CDOT will transmit routine inspection info of PWQFs to the municipality.
- Administrative Order of Consent: #73e – How CDOT will verify that maintenance needs transmitted to municipalities are completed.
- Administrative Order of Consent: #65 – Allocate adequate funding to Regional Offices to ensure long-term maintenance of PWQFs.

### 3.0 MS4 Roles and Responsibilities

- **PWQ Program Manager** – Roles and responsibilities are to spot check with the Regions that these actions are taking place (PWQ CM being given SAP numbers, inspections being performed, inspections loaded into SAP, work orders are being completed, time frame is being met).
- **PWQ Inspector** – Roles and responsibilities are defined in the SOP below.
- **Maintenance staff** – Roles and responsibilities are defined in the SOP below.

### 4.0 Methods/Procedures

#### ***PWQ CM Inventory Tracking:***

1. Individual PWQ CMs are given a unique SAP functional location number.
2. Information is stored in SAP about that unique SAP functional location number includes who maintains (CDOT or Local Agency or other) and the regulatory mechanism (IGA, Colorado Revised Statute 43-2-135 or other).
3. As new PWQ CMs are constructed, they will be given their own unique SAP functional location number.
4. The Regions will provide the necessary information to create SAP numbers for PWQ CMs to the PWQ Program Manager who will forward to appropriate SAP staff.

#### ***PWQ CM Inspection Types:***

CDOT Created four inspection types to comply with the MS4 Permit and the EPA Audit findings.

1. **Diagnostic Inspection:** a one-time inspection to establish the current condition of the PWQ CM, identify the maintenance action needed, to ensure it is functioning as designed and identify any re-design needed.
2. **Compliance Inspection:** an inspection required by the MS4 Permit to receive an inspection at least once a permit term (paraphrased). These inspections must meet specific MS4 Permit standards.
3. **Annual/Routine Inspections:** In order to ensure adequate long-term operation and maintenance of PWQ CMs, CDOT must inspect them more frequently than once every five years. In order to be in compliance, CDOT must identify and attend to

routine maintenance before the PWQ CM is no longer functioning as designed. These inspections will be conducted annually initially, but will need to be adjusted on each individual PWQ CM based on the field conditions and Maintenance staff feedback. This means the rate of inspection could increase or decrease, depending on the specific PWQ CM.

4. **Eyes-On Inspection:** These are more frequent and are a less in depth inspection. These would be performed throughout the year as the PWQ CM is checked for routine items such as post storm events, trash removal, mowing or the need to spray for weeds.

#### ***Inspection Communication for CDOT Maintained PWQ CMs and Tracking***

1. Inspections are performed by a qualified PWQ CM (aka PWQFs) Inspector and are placed into a written inspection report/form.
  - 1.1. In the case of Eyes-On Inspections, a written form is not needed and the communication goes straight to step 5.
  - 1.2. Report/Form includes findings or potential findings.
  - 1.3. Photos are often included.
  - 1.4. PWQ CM locations are identified using the unique SAP functional location number assigned to that individual PWQ CM.
  - 1.5. The Inspection report/forms are uploaded into SAP and identified using the unique SAP functional location number for the individual PWQ CM.
2. The Inspector notifies Maintenance via e-mail that an inspection has been performed and includes the inspection report/form.
  - 2.1. In the instance that the Inspector is part of the maintenance work crew, this step is not performed because the Inspector will help schedule the necessary work, therefore no additional notification is needed.
3. Once notified, Maintenance can then go into SAP, review the inspection report/form and schedule the necessary work based on the inspection report/form.
4. Work shall be performed within 6 months or a plan created within 6 months per MS4 Permit COS000005 Part I.E.2.c.v(C) 3 & 4.
5. The work is performed.
6. After the work is performed, a work order documenting that the task was completed is created.
  - 6.1. The work order is tied to the unique PWQ CM identification SAP functional location number.
  - 6.2. Often times, photos of the completed work are included in the completed work order for verification of work complete.
  - 6.3. In the case of Eyes-On Inspections, the time coding of inspection and use of the unique PWQ CM identification SAP functional location number in SAP is documentation of the inspection.

Until the new GEOe system is statewide (as previously described in response #62 from CDOT to EPA on 6/9/2017), this will be the interim process.

### **Inspection Communication for Local Agency Maintained PWQ CMs and Tracking**

1. Inspections are performed by a qualified PWQ CM Inspector and are placed into a written inspection report/form
  - 1.1. Report/form includes findings or potential findings.
  - 1.2. Photos are often included.
  - 1.3. PWQ CM locations are identified using the unique SAP functional location number assigned to that individual PWQ CM.
  - 1.4. The inspection report/forms are uploaded into SAP and again, identified using the unique SAP functional location number for the individual PWQ CM.
2. The Inspector notifies the Local Agency MS4 Manager via letter that an inspection has been performed and includes the inspection report/form.
  - 2.1. The letter includes the statement that the work shall be performed within 6 months or a plan is created per MS4 Permit COS000005 Part I.E.2.c.v(C) 3 & 4.
  - 2.2. The letter requests certification of completion of work (or plan) be sent back to the Inspector.
  - 2.3. The letter sent, shall be uploaded into SAP, filed by the unique SAP functional location number by the Inspector.
3. Inspector communicates with the Local Agency MS4 Manager around three months, to verify that the Local Agency will be able to complete the work, within the required 6 month MS4 Permit time period.
  - 3.1. This verification needs to be written communication; either via e-mail or another letter.
4. The Local Agency certifies that the work has been completed and sends that notice back to the Inspector via written e-mail or letter; including photos is preferred.
5. The Inspector uploads the received certification e-mail or letter from the Local Agency into SAP using the unique SAP functional location number for the individual PWQ CM.
6. If the Local Agency is not able to perform the required repairs, or does not send in a certification that the work has been completed or a plan created with in the 6 month time frame, and the work requested has not been completed, CDOT has the option to schedule the work using the CDOT maintained PWQ CM process (as described in #73a & #73b) and complete the work.
  - 6.1. CDOT has the option to send the Local Agency an invoice for the cost of the work.
7. Local Agency maintained PWQ CMs will be inspected by CDOT at least once per MS4 Permit term to verify that these certifications represent the level of maintenance required by CDOT's MS4 Permit.



## 5.0 Documentation and Reporting Requirements

- As noted above in section 4.0 and this SOP will also be placed in the Maintenance Manual.

## 6.0 MS4 Training Requirements

- Maintenance staff are routinely trained using the Maintenance Manual and through the Maintenance Training Academy.
- PWQ Program Manager will be given a copy of this SOP.
- Inspection staff will be given a copy of this SOP.
- Maintenance staff performing work on PWQ CMs will be given a copy of this SOP.

## 7.0 References to Existing Source Documents

- *Permanent Water Quality Program Manual*
- *Permanent Water Quality Program Description Document*
- *Permanent Water Quality Control Measure Maintenance Standard Operating Procedure #4.0*
- *Permanent Water Quality Section of the CDOT Maintenance Manual*
- *Permanent Water Quality Inspection Form*

## 8.0 SOP Revision History

Original version 9/01/2017.